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August 2, 2012

## **2010 CENSUS PLANNING MEMORANDA SERIES**

**No. 222**

MEMORANDUM FOR      The Distribution List

From:                      Burton Reist *[signed]*  
                                 Acting Chief, Decennial Management Division

Subject:                    2010 Census Integrated Communications Program Mail Response  
                                 Rates/Take 10 Assessment Report

Attached is the 2010 Census Integrated Communications Program Mail Response Rates/Take 10 Assessment Report. The Quality Process for the 2010 Census Test Evaluations, Experiments, and Assessments was applied to the methodology development and review process. The report is sound and appropriate for completeness and accuracy.

If you have any questions about this document, please contact Mary Bucci at (301) 763-9925.

Attachment

August 2, 2012

**2010 Census  
Integrated Communications Program  
Mail Response Rates/Take 10  
Assessment Report**

U.S. Census Bureau standards and quality process procedures were applied throughout the creation of this report.

**Final**

**Benjamin C. Saunders, Jr.**

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**Decennial Management Division**



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## Executive Summary

For the 2010 Census, a broad based advertising and marketing campaign was launched by the Census Bureau. This endeavor, known as the 2010 Census Integrated Communications Program, had a primary goal of increasing mail response rates for the 2010 Census. A segment of this campaign, the Mail Response Rates/Take 10 Program, provided a means of communicating the extent to which housing units in the United States and Puerto Rico were returning decennial census questionnaires and encouraged local officials to increase their community's mail response rates compared to Census 2000.

Within the Mail Response Rates/Take 10 Program, it was imperative that quality response data were delivered to stakeholders in an expeditious and efficient manner. Prior to the Mailout/Mailback phase of the 2010 Census, the Census Bureau determined that there would be an increased number of vacant housing units caused by relatively poor economic conditions and recent natural disasters (e.g., Hurricane Katrina). As a result, the Census Bureau adopted the term "mail participation rate", which was used in place of "mail response rate" when dealing with the public. This rate provided a better gauge of community involvement since it did not include census questionnaires that were deemed "undeliverable as addressed" by the United States Postal Service.

The mail participation rate (also referred to as "participation rate" in this assessment) and the mail response rate (also referred to as "response rate" in this assessment) were both calculated and reported by the Mail Response Rates/Take 10 Program. They are defined as the following:

- Mail Participation Rate – This measure included unduplicated mail returns from the Mailback universe based on the kind of initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with identification numbers associated, and Telephone Questionnaire Assistance phone responses with identification numbers associated. "Be Counted" forms were included in final mail participation rates for the Mail Response Rates Program but not for the Take 10 Program due to a data distinction issue. *Questionnaires returned "Undeliverable as Addressed" by the United States Postal Service were not counted as responses and were not included in the mailback universe, when calculating the mail participation rate.*
- Mail Response Rate – This measure included unduplicated mail returns from the mailback universe based on the kind of initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with identification numbers associated, and Telephone Questionnaire Assistance phone responses with identification numbers associated. "Be Counted" forms were included in final mail response rates. *Questionnaires returned "Undeliverable as Addressed" by the United States Postal Service were not counted as responses but were included in the mailback universe, when calculating the mail response rate.*

This assessment focuses on the processes and operations used to deliver and post 2010 Census and Census 2000 mail response data at various levels of census geography. Throughout this assessment, for ease of explanation, the Mail Response Rates/Take 10 Program will be



frequently referred to as two separate entities: the Mail Response Rates Program and the Take 10 Program. The Mail Response Rates Program posted on the Census Bureau intranet, participation rates, response rates, and other data from the 2010 Census and Census 2000 for use by Census Bureau employees. Data provided to Census Bureau employees by the Mail Response Rates Program were more detailed; meant to be used by the Census Bureau for planning and rapid response. The Take 10 Program posted on the 2010 Census website, participation rates from the 2010 Census and Census 2000 for use by governmental entities, elected officials, Complete Count Committees, community based organizations, and the general public.

The Mail Response Rates/Take 10 Program met its intent to deliver mail response data from the 2010 Census in “real time” on the next business day. Software developed by the Census Bureau enabled comparisons of mail response rates and mail participation rates from the 2010 Census to those of Census 2000.

It is recommended for this or similar operations of future decennial censuses we:

- Get input from subject matter experts with prior decennial census experience early in the program development process.
- Complete and finalize program requirements early in the program development process.
- Involve senior management early in the program development process.
- Include communications representatives from the Associate Director for Communications in program operations meetings.
- Include operations staff, especially from the Decennial Management Division, in the Associate Director for Communications staff meetings, during the 2020 decennial data collection period.

# **1. Introduction**

## **1.1 Scope**

The aim of this assessment is to describe the various efforts that the 2010 Census Integrated Communications Program (ICP) engaged in during the 2010 Census and the outputs that resulted from this work. Analyzing, interpreting, and synthesizing the effectiveness of the ICP is beyond the scope of this study. The purpose of this study is to assess the planning and implementation of the Mail Response Rates/Take 10 Program (MRR/Take 10). This assessment will help research and development teams with organizing similar programs for the 2020 Census.

## **1.2 Intended Audience**

The intended audience is census managers, stakeholders, and decision makers who will provide recommended improvements and other changes for similar programs for the 2020 Census.

# **2. Background**

## **2.1 Census 2000 - “How America Knows What America Needs”**

During Census 2000, the Census Bureau used the “How America Knows What America Needs” (HAKWAN) campaign to promote the census and measure the percentage of questionnaire forms returned by mail. The campaign helped deliver a final mail response rate of 67.4 percent (U.S. Census Bureau, 2004). Response rates included Telephone Questionnaire Assistance (TQA) phone responses with identification (ID) numbers associated, Internet Program questionnaires, and the following forms mailed to the Census Bureau:

- Initial questionnaires (mailed out and delivered)
- Replacement questionnaires
- Form fulfillment questionnaires with ID numbers associated
- “Be Counted” questionnaires

Questionnaires returned “Undeliverable as Addressed” (UAA) by the United States Postal Service were not counted as responses but were included in the mailback universe.

The HAKWAN campaign included two components: “90 Plus Five” and “Because You Count.” The “90 Plus Five” component sought to encourage residents to return their census forms by challenging communities to increase their response rates by at least five percentage points over the 1990 Census. The “Because You Count” component sought to educate the public about the enumerators who visited non-responding housing units and the importance of cooperating with them (Dimitri and Treat, 2000). HAKWAN included three types of enumeration areas in the universe for the calculation of response rates:

- Mailout/Mailback
- Update/Leave
- Urban Update/Leave

During Census 2000, the Census Bureau used both short-form and long-form questionnaires to garner census responses. The short form was delivered to approximately 83 percent of all housing units and the long form was delivered to approximately 17 percent of all housing units. The mailback universe included 117,661,748 housing units (Brady and Stackhouse, 2003).

Response data were posted on an internal Census Bureau intranet site and an external Internet site. Data posted internally went through a stringent quality assurance (QA) process before they were released externally. During the QA process, mail response rates were checked for critical errors and warnings. Data for High Profile Areas were also monitored. These categories are defined in the following table:

**Table 1: Categories for Quality Assurance Process for HAKWAN**

<b>TYPE</b>	<b>DEFINITION</b>
<b>Critical Errors</b>	Non-number rates, rates over 100 percent, or anomalies that were remarkable. Critical errors were replaced with the previous day's data for the entity.
<b>Warnings</b>	Entities that had mail response rate increases of 10 percent or more when compared to the previous day's rate.
<b>High Profile Areas</b>	States and large population centers (Dimitri and Treat, 2000).

**Source: Examination of Census 2000 Initial Response Rates and the '90 Plus Five Project Report**

Internal postings occurred around 6:00 am and external postings occurred around 6:00 pm. Data were posted only on weekdays. There was a two-day lag between data transmission and actual posting.

## HAKWAN Timeline

The HAKWAN campaign began on January 11, 2000 and concluded on September 19, 2000. Key program dates were as follows:

**Table 2: HAWKAN Timeline for 2000 Census**

<b>DATE (in 2000)</b>	<b>DESCRIPTION</b>
<b>March 3 – March 30</b>	Census questionnaires were delivered to housing units by the United States Postal Service or by Census Bureau personnel.
<b>March 3 – April 18</b>	Questionnaire responses from the Internet program were collected.
<b>March 6 – March 8</b>	Advance Letters for Update/Leave were delivered by the United States Postal Service.
<b>March 13 – March 15</b>	Initial Questionnaires were delivered in mailout/mailback areas by the United States Postal Service.
<b>March 20 – March 22</b>	Reminder post cards were delivered by the United States Postal.
<b>March 27 – April 11, April 19, and April 25</b>	Preliminary mail response rates for levels of geography were posted (daily, excluding weekends).
<b>April 27 – June 26</b>	Non Response Followup (NRFU) operations took place.
<b>September 19</b>	Final mail response rates for levels of geography were posted.

Source: Examination of Census 2000 Initial Response Rates and the '90 Plus Five Project'  
Census 2000 Topic Report No. 11 Response Rates and Behavior Analysis  
Census 2000 Mail Response Rates Final Report

## 2.2 2010 Census - Mail Response Rates Program

The Census Bureau developed the Mail Response Rates (MRR) Program to provide a means of communicating the extent to which housing units in the United States and Puerto Rico were returning decennial census questionnaires for the 2010 Census. The MRR Program posted to the Internet participation rates, mail response rates, and other data from the 2010 Census and Census 2000. The MRR Program was for internal Census Bureau use only. The program tracked the following:

- Initial questionnaires
- Replacement questionnaires
- Update/Leave questionnaires
- Responses given by phone to TQA operators
- Form fulfillment questionnaires
- “Be Counted” questionnaires

## Types of Enumeration

During the 2010 Census, four types of enumeration areas were included in the universe for the calculation of mail response rates and participation rates. They were:

- Mailout/Mailback
- Update/ Leave
- Military
- Urban Update/Leave

## Types of Rates

Four rates were provided for the program and are defined in the following table:

**Table 3: Rates Provided by the Mail Response Rates Program**

<b>TYPE</b>	<b>DESCRIPTION</b>
<b>Preliminary Response Rate</b>	Included initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, and TQA phone responses with ID numbers associated. Questionnaires returned UAA by the United States Postal Service were not counted as responses but were included in the universe. These data were updated and posted daily from March 6, 2010 through September 9, 2010.
<b>Preliminary Participation Rate</b>	Included initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, and TQA phone responses with ID numbers associated. Questionnaires returned UAA by the United States Postal Service were not counted as responses and were not included in the universe. These data were updated and posted daily from March 6, 2010 through September 9, 2010.
<b>Final Response Rate</b>	Included initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, TQA phone responses with ID numbers associated, and “Be Counted” forms. Questionnaires returned UAA by the United States Postal Service were not counted as responses but were included in the universe. These data were posted on October 4, 2010.
<b>Final Participation Rate</b>	Included initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, TQA phone responses with ID numbers associated, and “Be Counted” forms. Questionnaires returned UAA by the United States Postal Service were not counted as responses and were not included in the universe. These data were posted on October 4, 2010.

Source: Cost & Progress System

Rates were provided at the following levels of geography:

- National
- State
- County
- Collection Tract
- Incorporated Place
- Minor Civil Division (MCD) (governmental MCDs only)

- Municipality
- Consolidated City
- American Indian Area
- American Indian Area/Tract
- Puerto Rico/Municipio
- Puerto Rico/Local Census Office (LCO)
- Local Census Office
- Regional Census Office
- Collection Tract (Spanish Assistance Housing Units Only)

During the program, rates for Puerto Rico were displayed separately. The US national rate was a sum of all collection tract level data, excluding Puerto Rico.

### **Postings**

Postings for the MRR Program usually occurred around 10:00 am. There was a one-day lag between data transmission and actual posting.

### **2.3 2010 Census - Take 10 Program (Take 10)**

The Response Rate Feedback Program was officially renamed the Take 10 Program in December 2009. The program was developed to encourage public cooperation in returning 2010 Census questionnaires, thereby reducing the NRFU universe. It also inspired local officials to increase their community's mail participation rate compared to Census 2000.

The Take 10 Program provided participation rates to external stakeholders, such as governmental entities, elected officials, Complete Count Committees, and members of the public through the Internet. Since participation rates excluded housing units whose forms were returned to the Census Bureau as UAA by the United States Postal Service, they portrayed a better measure of actual public involvement. The program tracked the following:

- Initial questionnaires
- Replacement questionnaires
- Update/Leave questionnaires
- Form fulfillment questionnaires
- Responses given by phone to TQA operators

The program intended to track "Be Counted" forms, which were to be included in the calculation of final participation rates. They were not added due to a data distinction issue.

## Goals

The goals of the Take 10 Program were to:

- Encourage public cooperation in returning the 2010 Census questionnaires, thereby reducing the burden on the NRFU operation.
- Communicate the importance of the 2010 Census.
- Communicate the ease of census participation.
- Reduce the cost of the 2010 Census.
- Achieve a more accurate count.
- Display participation rates on a public Internet site for use by governmental entities, elected officials, Complete Count Committees, community based organizations, and others.

In order to meet its goals, the Take 10 Program:

- Posted 2010 Census participation rates of active governmental entities in mailback areas on the Internet during the delivery and mailback period.
- Used the Internet to display information helpful for planning activities to improve participation rates in the 2010 Census.
- Raised awareness and motivated communities by providing their current participation rates along with their participation rates from Census 2000.
- Provided participation rates to external stakeholders such as governmental entities, elected officials, Complete Count Committees, and the public.

## Types of Rates

The program delivered both preliminary participation rates and final participation rates. They are defined in the following table:

**Table 4: Rates Provided by the Take 10 Program**

<b>TYPE</b>	<b>DESCRIPTION</b>
<b>Preliminary Participation Rate</b>	Included initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, and TQA phone responses with ID numbers associated. Questionnaires returned UAA by the United States Postal Service were not counted as responses and were not included in the universe. These data were updated and posted daily from March 22, 2010 through April 28, 2010.
<b>Final Participation Rate</b>	Included initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, and TQA phone responses with ID numbers associated. Questionnaires returned UAA by the United States Postal Service were not counted as responses and were not included in the universe. These data were posted on October 21, 2010.

Source: Cost & Progress System

Rates were provided at the following levels of geography:

- National
- State
- County
- Collection Tract
- Incorporated Place
- Minor Civil Division (MCD) (governmental MCDs only)
- Municipality
- Consolidated City
- American Indian Area (Reservation)
- Puerto Rico/Municipio
- Puerto Rico State Equivalent Total

During the program, rates for Puerto Rico were displayed separately. The national rate was a sum of all of the collection tract level data, excluding Puerto Rico.

## Postings

It was very important to guarantee that all data posted externally were free of error. As a result, these data were required to go through a QA process (see Appendix A for this process). During this process, participation rates were checked to see if there were critical errors and/or outliers. Data for High Profile Top 100 Places were also monitored. These categories were defined as:

**Table 5: Categories for Quality Assurance Process - Take 10 Program**

<b>TYPE</b>	<b>DESCRIPTION</b>
<b>Critical Errors</b>	The participation rate was less than zero percent, greater than 100 percent or lower than the last approved.
<b>Outliers</b>	The change in the participation rate from the previous day to the current day was outside of three standard deviations from the national mean for that level of geography.
<b>High Profile Top 100 Places</b>	The 100 largest places in the United States based on recent population estimates.

Source: Quality Assurance Process Document

Postings for the Take 10 Program usually occurred around 4:00 pm. Data were posted on the website only on weekdays. There was a one-day lag between data transmission and actual posting.

## 2.4 Mail Response Rates/Take 10 Program Timeline

The program began with a December 2, 2008 planning meeting and concluded on October 21, 2010, with the final Internet posting of participation rates through the “2010 Census Mail Participation Rate Map.”



## **Staffing**

A cross-functional work team managed and coordinated the tasks required for calculating, reporting, and posting mail response rates, participation rates, and related data. This group, referred to as the “Mail Response Rates/Take 10 Program Team” consisted of employees from the Census Bureau’s Decennial Management Division (DMD), Customer Liaison and Marketing Services Office (CLMSO), Census 2010 Publicity Office (C2PO), Field Division (FLD), Decennial Statistical Studies Division (DSSD), Decennial Systems and Processing Office (DSPO), Public Information Office (PIO), Geography Division (GEO), and Systems Support Division (SSD).

An external contractor, DraftFCB, assisted by developing Smart Suite, a web-based application that used 2010 Census data to provide current information about different locations in the United States by grouping them into “designated marketing areas.” The information was then used to determine areas of low participation and areas that became focal points for marketing and advertising efforts. Although Smart Suite contained freely releasable information, it was only for use by identified Census Bureau employees and partners. Data supporting efforts for island areas other than Puerto Rico were not represented in Smart Suite. DraftFCB also developed the Internet software used for the “2010 Census Mail Participation Rate Map.”

## **3. Methodology**

### **3.1 Method**

Data to answer the research questions were obtained from other assessments and evaluations, meeting notes, Lessons Learned reports, communications with Census Bureau staff who worked on the MRR/Take 10 Program, and the following:

- The MRR System (used for the internal posting of census response data);
- 2010 Census Mail Participation Rate Map (used for the external posting of census participation rates);
- Smart Suite;
- Response Rate Analysis/Center for Economic Studies (CES);
- Information collected from the Mail Response Rates/Take 10 Program, mainly through its team members;
- Mass media.

### **3.2 Questions to be Answered**

Did the Mail Response Rate/Take 10 Program successfully:

1. Provide a means of communicating the extent to which housing units were returning decennial census questionnaires? Explain.
2. Coordinate and manage the tasks required for reporting and posting mail response rates and participation rates throughout the product development process? Explain.

3. Measure the percentage of questionnaire forms returned by mail? Explain.
4. Provide participation rates to the public in a timely manner? Explain
5. Deliver participation rates and mail response rates to Census Bureau employees in a timely manner? Explain.
6. Provide the Census Bureau with the data needed to facilitate and improve census operations at the national and regional levels? Explain.
7. Provide information and tools (promotional materials, tool kits, etc.) that could be utilized to facilitate and improve census operations at the national and regional levels? How were these items utilized?
8. Supply timely and useful information to public officials?
9. Respond to program change requests quickly? Explain.
10. Document the Take 10 Challenges that occurred throughout the country? What and how many took place?
11. Provide a way to compare mail response rates and participation rates from the 2010 Census to those from Census 2000 in the Mail Response Rates Program? Explain.
12. Provide a way to compare participation rates from the 2010 Census to those from Census 2000 in the Take 10 Program? Explain.
13. Allow for participation rate data to be used by third parties (i.e. Google Earth)? Explain.
14. Build quality assurance procedures into the validation process of mail participation rates?

#### **4. Limitations**

The effects of the MRR/Take 10 Program are hard to quantify and isolate into direct, attributable participation results. Over time, many efforts have been made to make such correlations, with mixed success. Therefore, this assessment at its barest level is designed as a mechanism to express the outcomes of measureable items such as the activities undertaken, processing time of posted data, participation rates and MRR reports. It is limited to this scope, and should be used as one of many tools for a truly thorough review of the MRR/Take 10 Program.

#### **5. Results**

##### **5.1 Did the Mail Response Rates/Take 10 Program provide a means of communicating the extent to which housing units were returning decennial census questionnaires? Explain.**

The Mail Response Rates/Take 10 Program provided a means of communicating the extent to which housing units returned their 2010 Census questionnaires by using mail response rates, participation rates, and other related data. The MRR portion of the program utilized software developed by DMD MIS staff using Statistical Analysis System (SAS) Business Intelligence Platform and Oracle Database to make and deliver reports (U.S. Census Bureau, 2009). The Take 10 portion of the program utilized software developed externally by DraftFCB.

## Mail Response Rates Program

Mail Response Rates Program software provided reports for internal use only by Census Bureau employees. These data were the basis for many operational decisions during the 2010 Census (see Appendix B for a listing of these reports). The reports provided detailed data that were updated daily, on weekdays, during the 2010 Census on the following dates:

- Preliminary Response Rates, Preliminary Participation Rates, and Related Data – March 6, 2010 to September 9, 2010, and October 4, 2010.
- Final Response Rates, Final Participation Rates, and Related Data – October 5, 2010.

The following is an example of a report from the MRR Program:

**Figure 1: Example of a Mail Response Rates Report - Preliminary Unduplicated Mail Response Rates National - State - County - Collection Tract**

2010 Census Mail Response Rates Preliminary Unduplicated Mail Response Rates National > State > County > Collection Tract														
Report Viewed: Monday, June 27, 2011 10:15:01 AM EDT Report Produced Date: Report_Produced_Date: 09/09/2010 Operation Start and End Dates														
	Planned Start Date	Planned End Date	Actual Start Date	Actual End Date										
National Level														
National Level	03/09/2010	10/08/2010	03/09/2010	None										
	Progress As Of Date	Universe	2000 Final Response %	2000 Final Response % before NRFU	Total Cumulative Response %	Total Cumulative Responses	Total Daily Responses	Initial Questionnaire Cumulative Response %	Initial Questionnaire Cumulative Responses	Initial Questionnaire Daily Responses	Replacement Questionnaire Cumulative Response %	Replacement Questionnaire Cumulative Responses	Replacement Questionnaire Daily Responses	Form Fulfillment Cumulative Response %
National Total	09/08/2010	130,042,254	68.99%	66.45%	65.81%	85,575,181	77	62.88%	81,769,100	71	2.86%	3,715,835	6	0.05%
	Form Fulfillment Cumulative Responses	Form Fulfillment Daily Responses	Telephone Questionnaire Assistance Cumulative Response %	Telephone Questionnaire Assistance Cumulative Responses	Telephone Questionnaire Assistance Daily Responses	Undeliverable - As - Addressed Cumulative %	Undeliverable - As - Addressed Cumulative	Undeliverable - As - Addressed Daily	2000 Final Participation %	Total Cumulative Participation %				
National Total	70,256	0	0.02%	19,990	0	11.04%	14,353,948	0	74.28%	73.97%				

Source: Cost and Progress System

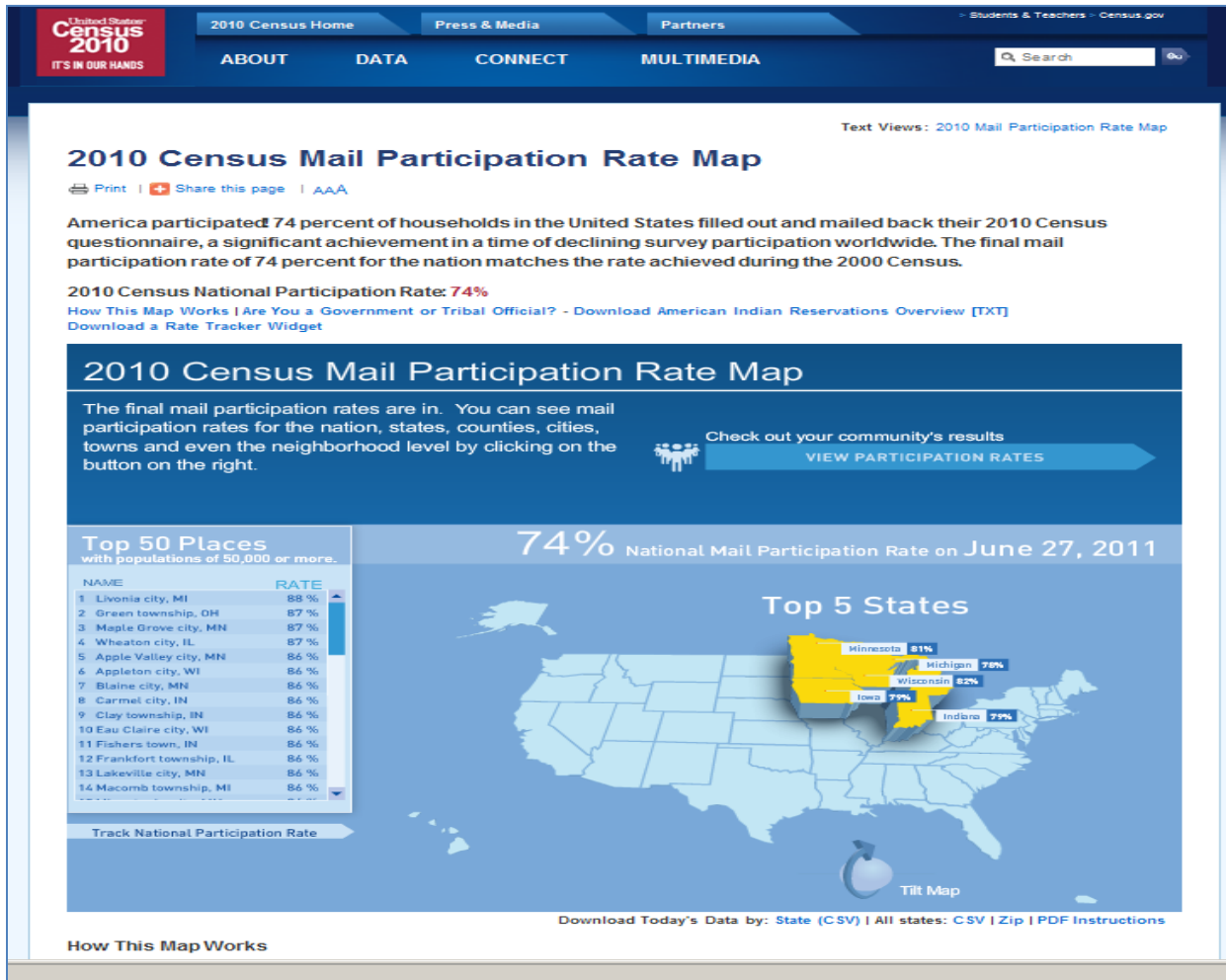
## Take 10 Program

For the Take 10 portion of the program, software developed by Draft FCB was used to produce the “2010 Census Mail Participation Rate Map.” The software was designed for external use and was available on the Internet for governmental agencies, Complete Count Committees, community organizations, and the general public. Information was available in map views and in comma separated values files. Data were updated daily, on weekdays, during the 2010 Census on the following dates:

- Preliminary Participation Rates – March 22, 2010 to April 28, 2010
- Final Participation Rates – October 21, 2010

The following figure is a screenshot of the Internet homepage from the “2010 Census Mail Participation Rate Map”:

Figure 2: “2010 Census Mail Participation Rate Map” - Homepage Screenshot



Source: 2010census.gov Website

**5.2 Did the Mail Response Rates/Take 10 Program coordinate and manage the tasks required for reporting and posting mail response rates and participation rates throughout the product development process? Explain.**

The MRR/Take 10 Program coordinated and managed the tasks required for reporting and posting mail response rates and participation rates throughout the product development phase of the program. In 2007, the MRR/Take 10 Program Team discussed program requirements, target audiences, posting timeframe, levels of geography for rate data, and the quality assurance process for the Take 10 portion of the program. Sample report shells and help definitions were

developed. The team also created a risk/issue document, which was maintained by C2PO through their Risk Register. Team meetings took place on a weekly basis through the end of the program in October 2010. These meetings were the basis of the development and management of the program. Also, other teams were formed that included members of the MRR/Take 10 Program Team. They were as follows:

- Take 10 Issues and Resolutions Team – This weekly meeting’s purpose was to resolve issues pertaining to the Take 10 Program
- Mail Response Rates and Participation Rates Analysis Team – This daily meeting’s purpose was to discuss and integrate the analysis and interpretation of response data before meeting with Senior Executive Service staff.
- Quality Assurance Team – This daily meeting’s purpose was to review and certify participation rates for the Take 10 Program prior to their posting on the Internet
- Quality Assurance Review Team – This daily meeting’s purpose was to present and discuss participation rates with Assistant Division Chiefs prior to their posting on the Internet.

### **5.3 Did the Mail Response Rates/Take 10 Program measure the percentage of questionnaire forms returned by mail? Explain.**

The Mail Response Rates/Take 10 Program measured the percentage of questionnaire forms returned by mail. The measures used to relay this percentage were:

- Mail Response Rate (preliminary and final) – Included unduplicated mail returns from the Mailback universe in the kind of initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, and TQA phone responses with ID numbers associated. “Be Counted” forms were included in final mail response rates. Questionnaires returned UAA by the United States Postal Service were not counted as responses but were included in the Mailback universe.

$$\text{Mail Response Rate} = \frac{\text{Unduplicated Mail Returns from the Mailback Universe}}{\text{Mailback Universe}} * 100$$

- Mail Participation Rate (preliminary and final) - Included unduplicated mail returns from the Mailback universe in the kind of initial questionnaires (both mailout and Update/Leave), replacement questionnaires, form fulfillment questionnaires with ID numbers associated, and TQA phone responses with ID numbers associated. “Be Counted” forms were included in final mail participation rates for the Mail Response Rates Program but not for the Take 10 Program due to a data distinction issue. Questionnaires returned UAA by the United States Postal Service were not counted as responses and were not included in the Mailback universe.

$$\text{Mail Participation Rate} = \frac{\text{Unduplicated Mail Returns from the Mailback Universe} * 100}{\text{Mailback Universe} - \text{UAAs}}$$

During the 2010 Census, mail response rates, mail participation rates, and other response data at various geographic levels were posted on the intranet for Census Bureau employees. Also, mail participation rates at various geographic levels were posted on the Internet for governmental entities, elected officials, Complete Count Committees, community based organizations, and others.

**5.4 Did the Mail Response Rates/Take 10 Program provide participation rates to the public in a timely manner? Explain.**

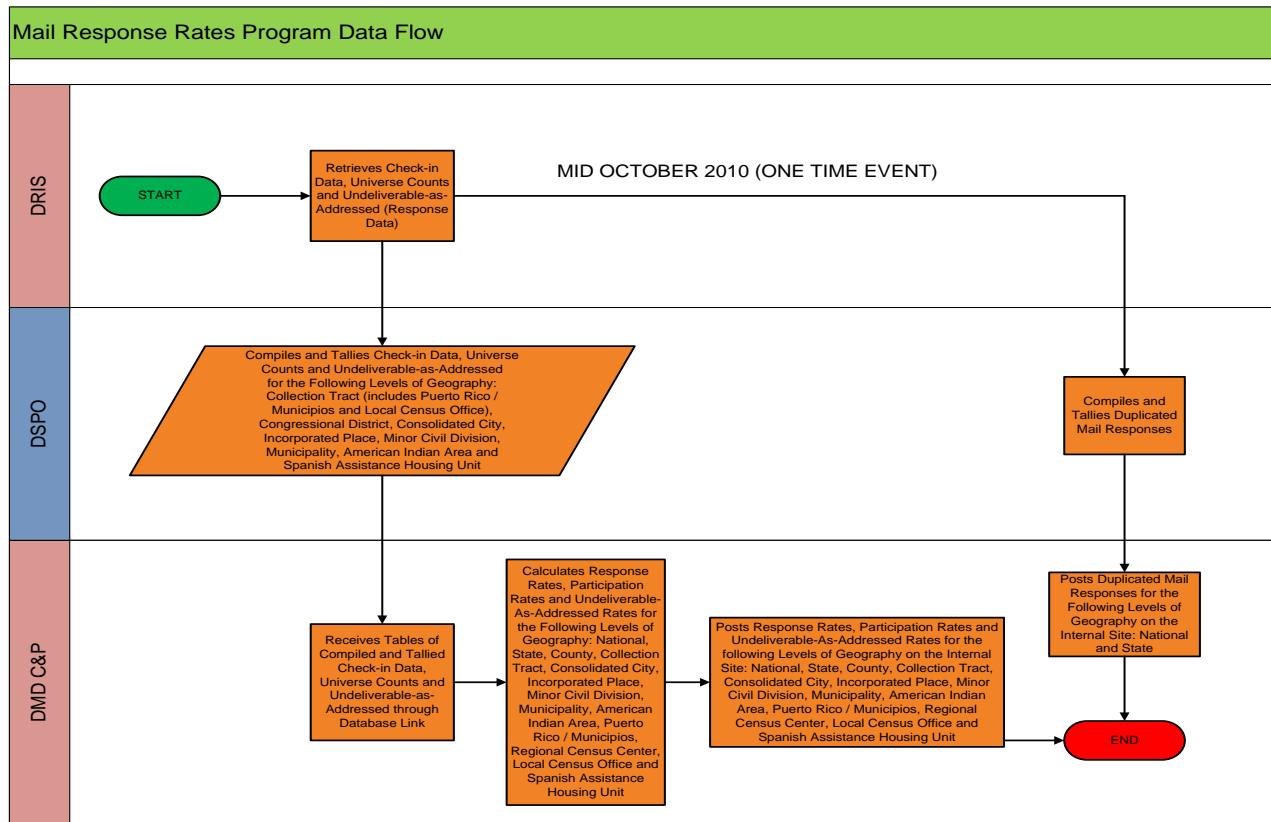
The MRR/Take 10 Program provided mail participation rates to the public in a timely manner. During the posting period, the goal was to have participation rates from a given day quality assured and posted externally, on the Internet, by 4:00 pm of the next business day. This goal was achieved for almost all postings during the program. The prompt posting of participation rates enabled governmental entities, elected officials, Complete Count Committees, community based organizations, and the general public to raise awareness and motivate communities.

The MRR/Take 10 Program Team succeeded in its effort to reduce the lag time of data dissemination externally. During the 2010 Census, external postings of participation rate data followed a data flow process, which is shown in Appendix C.

**5.5 Did the Mail Response Rates/Take 10 Program deliver participation rates and mail response rates to Census Bureau employees in a timely manner? Explain.**

The MRR/Take 10 Program provided participation rates and response rates to Census Bureau employees in a timely manner via the Census Bureau intranet. For the 2010 Census an effort was made to produce rates for census stakeholders. During the internal posting period, our goal was to deliver rates from a given day near 10:00 am of the next business day. This goal was achieved for most postings. For the 2010 Census, internal postings of participation rate data followed the following process:

**Figure 3: Mail Response Rates Program Data Flow Process Chart for Internal Postings**



**Source: MRR Program Data Flow Chart**

The quick turnaround of participation rate and response rate data benefitted all segments of the ICP. It allowed for improved planning and the rapid allocation of resources to areas low in 2010 Census participation. The effectiveness of the timely postings of these rates is confirmed by the following percentages, taken from a survey of 81 media specialists, partnership coordinators, team leaders, and partnership specialists (U.S. Census Bureau, 2010c):

- 92.2 percent rated the Take 10 Mailout/Mailback Participation Rate Campaign as “very effective” or “effective” as local media engagement tools in their regions. This was the highest of the 14 2010 Census campaigns listed.
- 43.2 percent rated the Take 10 Mailout/Mailback Participation Rate Campaign as the “most effective” of the public relations campaigns. This was the highest of the 14 2010 Census campaigns listed.
- 88.2 percent frequently used the 2010 Census Website, which included the Take 10 Mail Participation Rate Map. This was the highest of the 26 public relations tools listed.

**5.6 Did the Mail Response Rates/Take 10 Program provide the Census Bureau with the data needed to facilitate and improve census operations at the national and regional levels? Explain.**

The MRR/Take 10 Program provided the Census Bureau with the data needed to facilitate and improve census operations at the national and regional levels. The MRR Program measured the percentage of survey forms that were returned by mail. Software for the MRR System was developed by DMD MIS (U.S. Census Bureau, 2009). Some of the data provided by this software were as follows:

- 2000 Final Response Rate percentage
- Total Cumulative Response percentage
- Initial Questionnaire Cumulative Response percentage
- Replacement Questionnaire Cumulative Response percentage
- Form Fulfillment Cumulative Response percentage
- Telephone Questionnaire Assistance Cumulative Response percentage
- Undeliverable-As-Addressed Cumulative percentage
- 2000 Final Participation percentage
- Total Cumulative Participation percentage

(See a complete list of data provided by DMD MIS in Appendix D)

These data were updated daily, in table format, on business days during the program. Approved Census Bureau employees were allowed access to the MRR System. Those who did not have access could retrieve data provided by the Take 10 Program through the “2010 Census Mail Participation Rate Map”.

High questionnaire response for the 2010 Census was important for the accuracy of the results. Therefore, response data from these programs were very useful at Census Bureau headquarters. These response data were the basis for many operational decisions, some of which took place in the following daily meetings:

- Operational Status Meeting – The purpose of this meeting was to brief and update Division Chiefs on census operations. Operational decisions were made in these meetings.
- Executive Operations Committee – The purpose of this meeting was to review and discuss census operations with the Director of the Census Bureau and his staff (Deputy Director and select Associate Directors). High-level operational decisions were made in these meetings.

At the regional level, these data generated many phone calls and e-mails from the general public, as well as media inquiries to staff about mail participation rates. Information about participation rates were used in promotional materials, such as door hangers, in low-responding census tracts. Some general regional activities that depended on response data during the 2010 Census were:



- March to the Mailbox – These rallies took place on April 10, 2010 in approximately 6,000 locations that had low census mail response. The purpose was to encourage residents to mailback their census questionnaires.
- Take 10 Challenge – This implored the nation and its entities to surpass their Census 2000 mail participation rates.

**5.7 Did the Mail Response Rates/Take 10 Program provide information and tools (promotional materials, tool kits, etc.) that could be utilized to facilitate and improve census operations at the national and regional levels? How were these items utilized?**

The MRR/Take 10 Program provided information and tools that could be utilized to facilitate and improve census operations at the national and regional levels. Some of these were as follows:

- 2010 MRR Report Module (Cost & Progress System) – This was utilized at the Census Bureau to gather “real time” response data during the 2010 Census.
- 2010 Census Mail Participation Rate Map – This was utilized at the national and regional levels as a mechanism to stay abreast of mail participation rates for governmental units.
- Smart Suite – This was utilized by Census Bureau staff, contractors, and non-employees with a verified need related to 2010 Census activities. It contained a data dashboard, which monitored mail participation rates nationally down to the tract level.
- Take 10 Fact Sheet – This was utilized by individuals wanting a greater understanding of the Take 10 Campaign.
- Response Rate Feedback Program (RRFP) Fact Sheet – This was utilized by individuals wanting a greater understanding of the RRFP. At the time this document was produced, the RRFP referred to the MRR Program.
- Take 10 Program Frequently Asked Questions – This was utilized by individuals who had specific and general questions about the program.
- Take 10 Turnkey Kit – This was utilized by Complete Count Committees and elected officials as a resource to improve their community’s 2010 Census mail participation rate over previous censuses.

**5.8 Did the Mail Response Rates/Take 10 Program supply timely and useful information to public officials? Explain.**

The MRR/Take 10 Program supplied timely and useful information to public officials during the 2010 Census. Relevant response data from the program were delivered on the next business day during the census. This enabled public officials to respond quickly to areas with lower than desired mail participation. Some examples follow:

- **Baltimore, MD** - Mayor Stephanie Rawlings-Blake asked residents to "March to the Mailbox" while challenging her constituents to mail back their census forms to increase their current participation rate.
- **Rockford, IL** - Mayor Larry Morrissey wanted to push the city's census return rate higher than their current rate. He stated that having an accurate count was vital to their future.

- **Cleveland, OH** - Mayor Frank Jackson attended a "Census Blitz" where he encouraged residents to mail in their census forms. At the time, their participation rate was well below the national rate.
- **Bridgeport, CT** - Mayor Bill Fitch encouraged residents to return their census forms. At the time, their participation rate was well below the state and national rates.
- **New York, NY** - Mayor Michael Bloomberg made another pitch to New Yorkers to mail back their census forms. At the time, their participation rate was well below the national rate.
- **Houston, TX** - Mayor Annise Parker urged residents to mail back their census forms. At the time, their participation rate was below the national rate.
- **Lewiston, ME** - Mayor Laurent Gilbert, Sr. encouraged the city's residents to respond to the census. The mayor stated, "Lewiston is again setting the pace." At the time, their participation rate was higher than the state average.
- **Jamestown, NY** - Mayor Sam Teresi encourages the city's residents to fill out and mail in their census forms. At the time, their participation rate was higher than the state and national rates.

This useful information also allowed towns and cities to compete against each other on mail participation. These events drew on the competitive nature of their residents and inspired them to return their census forms by mail. These "challenges" included:

- **Newark, NJ vs. Jersey City, NJ** - Jersey City wanted to pass Newark as the states most populous city. They both made an effort to get local residents to work census related jobs in their own neighborhoods to improve census participation while creating revenue for the city.
- **Fort Worth, TX vs. Arlington, TX** - The Mayor of Arlington issued a challenge to the Mayor of Fort Worth. If Arlington had the higher participation rate, Fort Worth would make May 4, 2010 "Arlington Counts in Fort Worth Day". If Fort Worth had the higher mail participation rate, Arlington would make May 4, 2010 "Fort Worth Counts in Arlington Day."
- **South Orange Village, NJ vs. Maplewood, NJ** - The Mayor of Maplewood and the President of South Orange Village competed against each other to see who would get the highest mail participation rate. The winner would receive a meal at the loser's expense.
- **Madisonville, KY vs. Prattville, AL** - The Mayor of Madisonville challenged the Mayor of Prattville to see who would get the higher mail participation rate. The loser, the Mayor of Madisonville, had to wear paraphernalia from Troy University, Auburn University, and the University of Alabama to a council meeting.
- **St. Anthony, ID vs. Sugar City, ID vs. Ashton, ID** - The Mayor of St. Anthony challenged the Mayors of Sugar City and Ashton on who would get the higher mail participation rate. The winner and their spouse would receive dinner courtesy of the losers.
- **Springfield, IL vs. Peoria, IL** - The mayors of the cities challenged each other on who would have the higher mail participation rate. The loser would have to travel to the winner's city and buy him dinner at his favorite restaurant.
- **St. Louis, MO vs. Kansas City, MO** - The mayors competed against each other to see who would improve the most against their mail participation rate from Census 2000. The

loser would have to send the winner a case of his hometown's favorite beer and "most delicious" barbeque.

The response data used by these public officials originated from the MRR/Take 10 Program. The availability of these data the next business day tremendously benefited their efforts.

**5.9 Did the Mail Response Rates/Take 10 Program respond to program change requests quickly? Explain.**

Once program specifications were approved, details were added and amended. The MRR/Take 10 Program responded to these program changes quickly. A majority of the changes were documented using "change request forms", which had to be approved by 2010 Census management prior to implementation. Change requests that were submitted and approved are listed in Appendix E.

**5.10 Did the Mail Response Rates/Take 10 Program document the Take 10 Challenges that occurred throughout the country? What and how many took place?**

The MRR/Take 10 Program and the ICP partially documented the Take 10 Challenges (competitions between governmental units pertaining to mail participation) that took place throughout the country during the 2010 Census. Therefore, there is no way to develop an all-encompassing list of events or determine how many took place. A general search of the Internet and a review of census documentation provided highlights of various contests. Some are listed in Section 5.8.

**5.11 Did the Mail Response Rates/Take 10 Program provide a way to compare mail response rates and participation rates from the 2010 Census to those from Census 2000 in the Mail Response Rates Program? Explain.**

The MRR/Take 10 Program provided a way for Census Bureau employees to compare mail response rates and participation rates from the 2010 Census to those from Census 2000. The program used software developed by DMD Cost & Progress specifically to track and report mail response data for the 2010 Census. This software was designed with the capability to compare mail response rates and participation rates from the 2010 Census to those from Census 2000 for the United States and Puerto Rico. Multiple reports, in tabular format, had these data/comparisons at various levels of census geography. They are listed in the following (U.S. Census Bureau, 2009):

- Preliminary Unduplicated Mail Response Rates National-RCC-LCO Type-LCO-State/County-Collection Tract
- Preliminary Unduplicated Mail Response Rates National - State - County - Collection Tract
- Preliminary Unduplicated Mail Response Rates National-RCC-LCO Type-LCO (Unmailables)
- Preliminary Unduplicated Mail Response Rates Incorporated Places in U.S - Incorporated Places by State - Incorporated Place

- Preliminary Unduplicated Mail Response Rates Minor Civil Divisions in U.S.-MCDs by State-MCDs by County-Minor Civil Division
- Preliminary Unduplicated Mail Response Rates Municipalities in U.S. - Municipalities by State – Municipality
- Preliminary Unduplicated Mail Response Rates Consolidated City Report
- Preliminary Unduplicated Mail Response Rates American Indian Areas In U.S.- American Indian Area-Collection Tract
- Preliminary Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-RCC-LCO Type-LCO-State/County-Collection Tract
- Preliminary Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-State-County-Collection Tract
- Preliminary Unduplicated Mail Response Rates Puerto Rico - LCO - Municipio - Collection Tract
- Preliminary Unduplicated Mail Response Rates Puerto Rico - Municipio - Collection Tract
- Final Unduplicated Mail Response Rates National-RCC-LCO Type-LCO-State/County-Collection Tract
- Final Unduplicated Mail Response Rates National-State-Collection Tract
- Final Unduplicated Mail Response Rates Incorporated Places in U.S - Incorporated Places by State - Incorporated Place
- Final Unduplicated Mail Response Rates Minor Civil Divisions in U.S.-MCDs by State-MCDs by County-Minor Civil Division
- Final Unduplicated Mail Response Rates Municipalities in U.S. - Municipalities by State – Municipality
- Final Unduplicated Mail Response Rates - Consolidated City
- Final Unduplicated Mail Response Rates American Indian Areas In U.S.-American Indian Area-Collection Tract
- Final Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-RCC-LCO Type-LCO-State/County-Collection Tract
- Final Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-State-County-Collection Tract
- Final Unduplicated Mail Response Rates Puerto Rico - LCO - Municipio - Collection Tract
- Final Unduplicated Mail Response Rates Puerto Rico - Municipio - Collection Tract

The column headings with the data used for these comparisons are:

- 2000 Final Response Percent
- 2000 Final Response Percent before NRFU
- Total Cumulative Response Percent
- 2000 Final Participation Percent
- Total Cumulative Participation Percent

**5.12 Did the Mail Response Rates/Take 10 Program provide a way to compare participation rates from the 2010 Census to those from Census 2000 in the Take 10 Program? Explain.**

The MRR/Take 10 Program provided a way to compare participation rates from the 2010 Census to those of Census 2000 in the Take 10 Program. Interactive software, known as the “2010 Census Mail Participation Rate Map”, provided the ability to compare participation rates from the 2010 Census to those from Census 2000 for the United States and Puerto Rico at various levels of census geography. This software was accessible through the Internet at <http://2010.census.gov/2010census/take10map/>.

**5.13 Did the Mail Response Rates/Take 10 Program allow for participation rate data to be used by third parties (i.e., Google Earth)? Explain.**

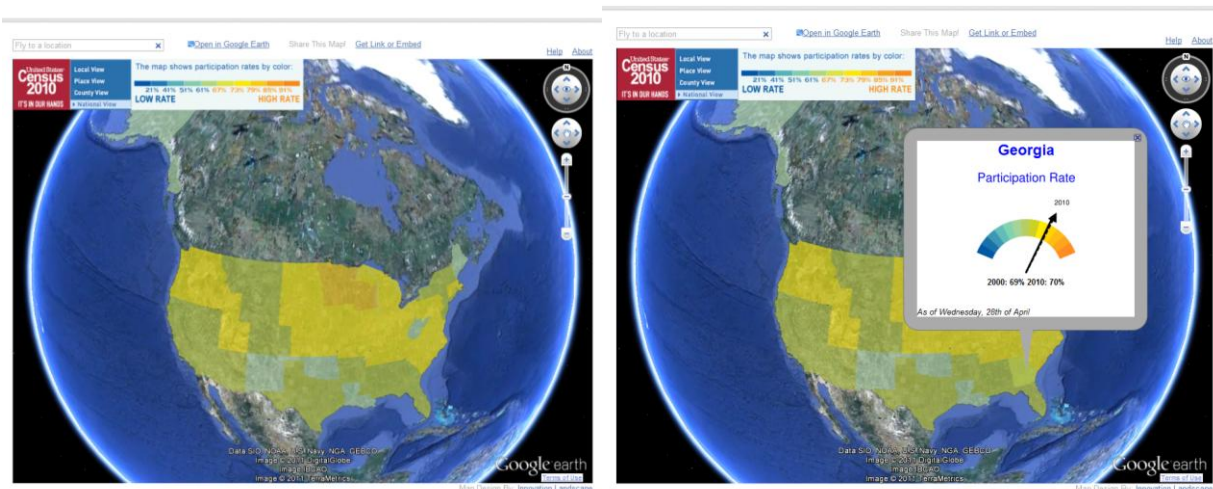
The MRR/Take 10 Program allowed for participation rate data to be used by third parties. Some of these parties used their own interactive software to display census response data taken from the Internet accessible “2010 Census Mail Participation Rate Map” and accompanying comma separated values data files. Some of these applications are reviewed in the following sections:

**Innovation Landscape**

This “Census 2010 Take 10 Map for Google Earth” provided the ability to view participation rates from the 2010 Census at the state, county, and local levels of geography. For comparison purposes, it also gave the participation rates at the same levels of geography for Census 2000. This application was intended for use by the media and the public.

The following is a screenshot of the homepage of the tool. The map of the United States is color-coded based on the mail participation rate of each state. The legend bar defining the colors is on the top left of the screenshot:

**Figure 4: Census 2010 Take 10 Map for Google Earth - Homepage Screenshot**



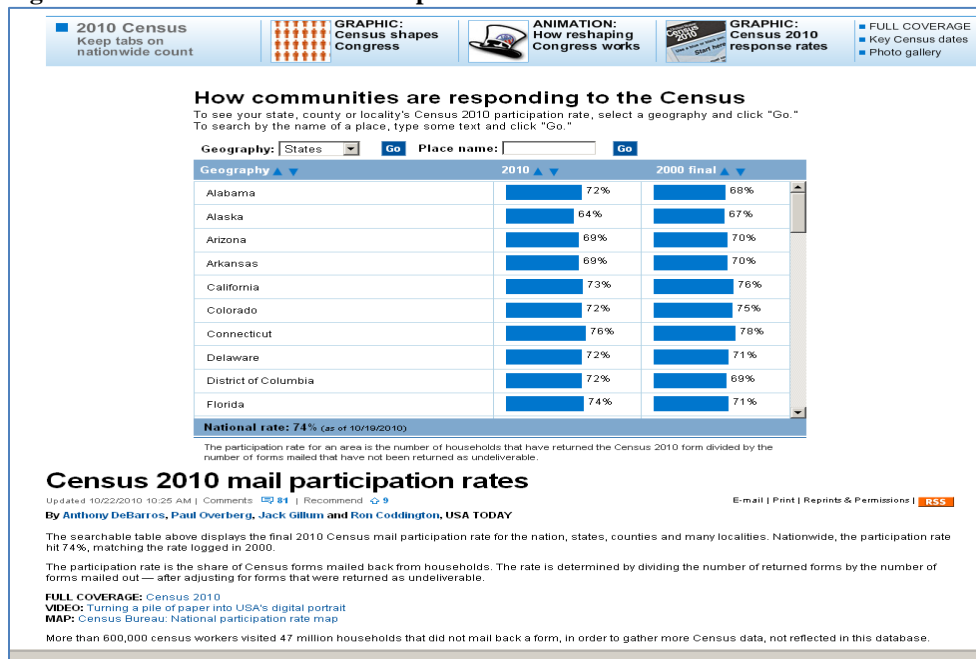
Source: Census 2010 Take 10 Map for Google Earth

Clicking on a state from the homepage displayed the participation rate for the state for the 2010 Census and Census 2000. A color-coded meter matching the legend bar in the top left of the screenshot was also displayed, signifying participation rates for the 2010 Census with an arrow. The same data were also available in this format at the “county view”, “place view”, and “local view”, with results down to the tract level of geography.

## USA Today

This application provided the ability to compare participation rates for the 2010 Census to participation rates for Census 2000 at the state, county, and locality levels of geography. The platform enabled the user to search with “drop-downs” the level of geography and state. The user was also able to type in a place name for a more refined search. The screen view used minimal graphics and displayed census data in tabular format.

Figure 5: “Census 2010 Mail Participation Rates” Software Screenshot



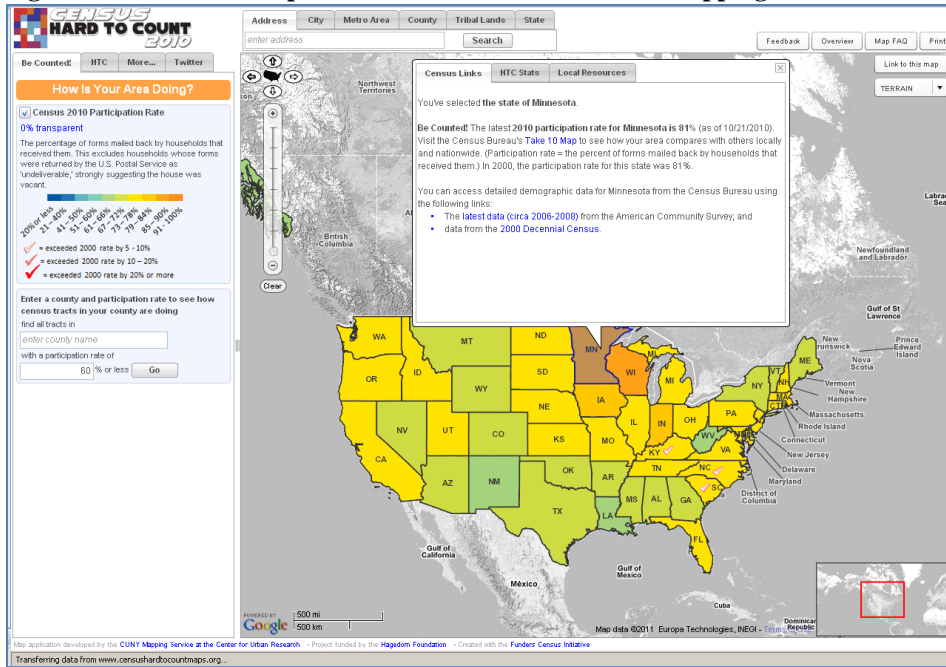
Source: USA Today Website

## Center for Urban Research, CUNY Graduate Center, City University of New York

The highly interactive “Census 2010 Hard-to-Count Mapping Website” application provided the ability to view participation rates from the 2010 Census at multiple levels of geography. For comparison purposes, it also provided participation rates at the same levels of geography for Census 2000. Data were accessible by searching by address, city, metropolitan area, county, tribal lands, and state; and were available down to the census tract level. This application also presented detailed data on the Hard-to-Count population, which was the intended goal of the design. In the “country” view of the map, if a state is selected a pop-up appears displaying “Census Links”. This tab gave the 2010 Census participation rate and the Census 2000

participation rate for the selected state. It also displayed hyperlinks to other sources of census data.

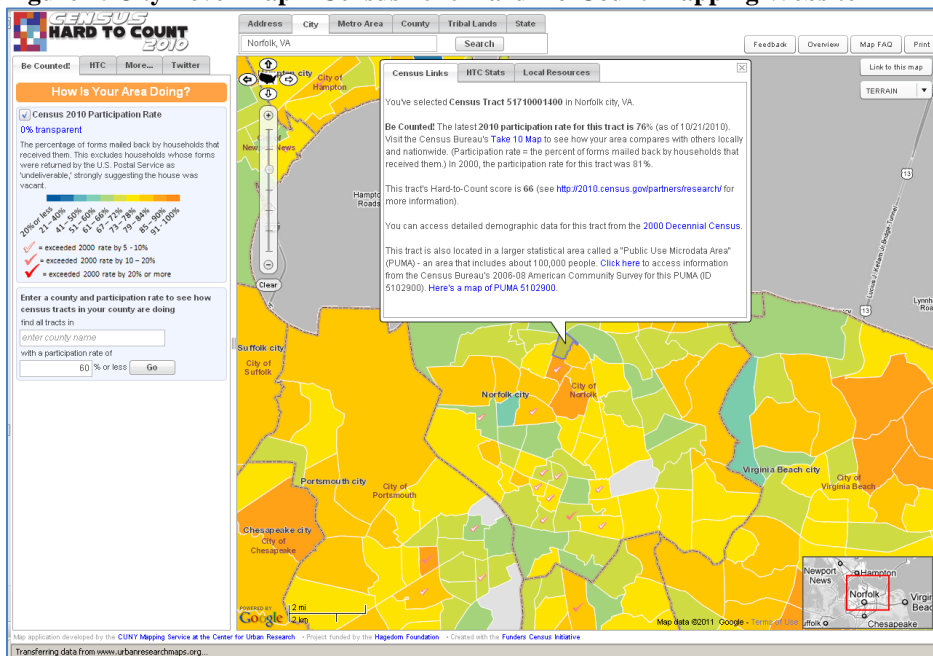
**Figure 6: State Level Map – Census 2010 Hard-To-Count Mapping Website**



Source: Census 2010 Hard-to-Count Mapping Website

Similar data were available at other geographical levels, as shown in the following figure showing census tracts in Norfolk, Virginia:

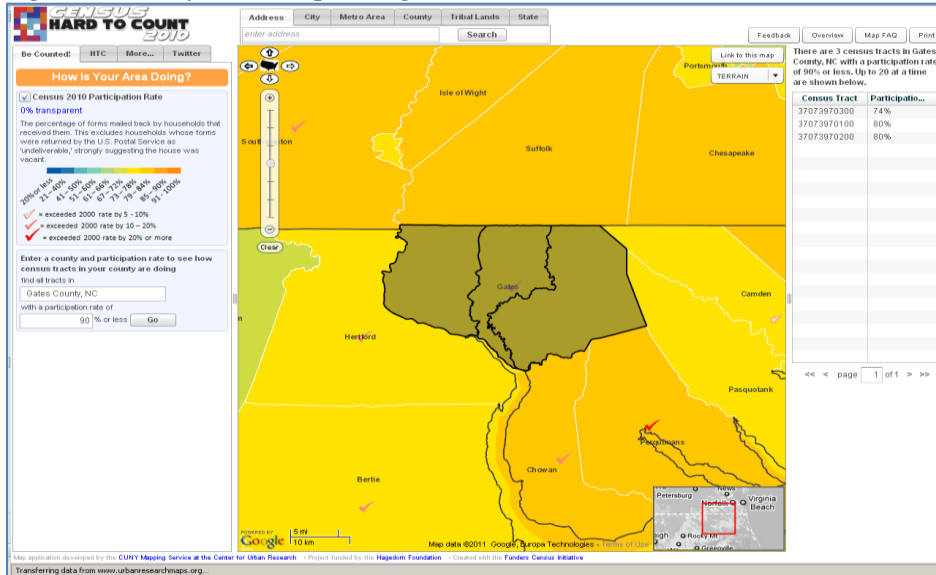
**Figure 7: City Level Map – Census 2010 Hard-To-Count Mapping Website**



Source: Census 2010 Hard-to-Count Mapping Website

There was also an option to enter parameters to show all tracts within a particular county that have a participation rate below a specified value, as shown in the following figure for Gates County, North Carolina:

**Figure 8: County Level Map through Parameter Search – Census 2010 Hard-To-Count Mapping Website**



**Source: Census 2010 Hard-to-Count Mapping Website**

The previous are just a few of the applications that were available to display 2010 Census participation rate data to the general public. These and the others helped keep Americans informed and engaged with the 2010 Census.

#### **5.14 Did the Mail Response Rates/Take 10 Program build quality assurance procedures into the validation process of participation rates? Explain.**

The MRR/Take 10 Program built quality assurance procedures into the validation process of participation rates. These procedures, developed by the MRR/Take 10 Program Team, certified 2010 Census participation rates before their posting on the Internet during the program.

In brief, the Quality Assurance Process involved producing a data file containing all participation rates categorized as critical errors, outliers, and “High Profile” Top 100 Places. They are defined in the following:

- Critical error – the participation rate is less than zero percent, greater than 100 percent, or lower than the last approved
- Outlier – the change in the participation rate from the previous day to the current day is outside of three standard deviations from the national mean for that level of geography
- “High Profile” Top 100 Places - the 100 largest places in the United States, based on recent population estimates



The Quality Assurance Team then reviewed the data file. Based on their review a number of different scenarios could occur, which are listed in the detailed quality assurance process in Appendix A.

## **6. Related Evaluations, Experiments, and/or Assessments**

- 2010 Census Integrated Communications Program Evaluation
- 2010 Census ICP assessment reports:
  - 2010 ICP Summary
  - Research
  - Paid Advertising
  - Earned Media and Public Relations
  - Rapid Response
  - 2010 Census Website
  - Portrait of America Road Tour
  - Promotional Materials
  - Census in Schools
  - National Partnership
  - Regional Partnership

## **7. Key Lessons Learned, Conclusions, and Recommendations**

After most of 2010 Census operations were completed, “Lessons Learned” sessions were organized throughout the Census Bureau to communicate the effectiveness of the 2010 Census. The following were taken from these sessions and from communications with program participants and stakeholders specifically for the MRR/Take 10 Program. For clarity, these key lessons learned and recommendations are segregated into two groups, signifying the MRRs Program and the Take 10 Program.

### **Mail Response Rates Program**

#### Lessons Learned

- The MRR System displayed response data to Census Bureau employees in a timely manner. This was needed to enable rapid response to issues as they arose.
- There were many program changes. We should have done a better job of defining and reviewing the program during the implementation process.
- Communications during planning and strategy could have been better between staff in the Communications Directorate and the MRR Program team.

#### Recommendations

- Develop full file testing prior to the census.
- Complete and finalize program requirements early in the development phase of the program.

- Include program operations staff in Communications Directorate meetings during the 2020 decennial data collection period, in an effort to facilitate the efficient sharing of real-time information.
- Develop and provide metrics pertaining to persons who have not responded to the census.
- Ensure that mechanisms are in place and operational to verify that forms without census ID numbers (non-IDs) are actually mail returns. This oversight eliminated the ability to distinguish “Be Counted” forms from other non-ID questionnaires. As a result, other non-IDs were included in “final response rates” and “final participation rates” released internally to Census Bureau employees. This oversight made it necessary to remove “Be Counted” forms from the “final participation rates” released to the public and delayed the final external posting.

## **Take 10 Program**

### Lesson Learned

- The QA process for Take 10 participation rate data was well-defined and worked as intended.
- The “2010 Census Mail Participation Rate Map” was automated, enabled regions to access data quickly, included a localized rate widget, allowed for the download of raw data files, and mapped participation rate data down to the census tract level of geography. Users appreciated these details.
- Some external to the Census Bureau did not have a full understanding of census geography, terminology, and data.
- There was no thorough documentation, guidelines, or requirements given to DraftFCB to assist them with the development of the “2010 Census Mail Participation Rate Map.”
- The Take 10 concept came late in the planning process for the 2010 Census.
- The delayed decision to provide participation rates instead of mail response rates added complexity to the program.
- Instructions on how to effectively use the “2010 Census Mail Participation Rate Map” were lacking.

### Recommendations

- GEO should be involved in developing a tutorial to explain census geography to external stakeholders.
- GEO should do the mapping for future Internet accessible “Mail Participation Maps” in order to better avoid mapping issues. The Census Bureau recommends having all mapping and geography functions developed in-house through GEO.
- Develop and define a plan for the Take 10 Challenge earlier.
- Provide participation rates to the general public at the tenths decimal place. The “2010 Census Mail Participation Rate Map” provided rates in whole numbers (no decimals).
- A mobile application should be developed for smartphones, etc.
- Make future mail participation applications robust and able to handle customer demands more quickly.

- Keep the program (software development and management) internal but have the capability to integrate with an external system. We have the expertise for these operations in-house.
- Include program operations staff in Communications Directorate meetings during the 2020 decennial data collection cycle to facilitate the efficient sharing of information.

## **8. Acknowledgements**

This document acknowledges Kimberly Higginbotham, Mary Bucci, Brenda Holmes, Dee Alexander, Kenneth Herrell, and Jonathan Zapata of the Decennial Management Division's Outreach and Promotion Branch for their help with planning and implementing the MRR/Take 10 Program. It also recognizes Adrienne Oneto, Jim Treat, and Jim Dinwiddie of the Decennial Management Division and Tasha Boone of the 2010 Census Publicity Office for their astute and discerning leadership throughout the program. Finally, this document acknowledges the entire Mail Response Rates/Take 10 Team for its expertise and hard work. Special distinction goes to Earl Letourneau and Geoffrey Jackson (DSSD); Michael Ratcliffe (GEO); Charles Kahn and Gerald Moore (DSPO); Gwinevere Mills, Joanne Bluhm, Jesus Lopez, and Annette Davis (DMD); Eric Newburger, Monica Wroblewski, and Alexandra Figueroa (C2PO); and Frank Brunotts and Carollynn Hammersmith (SSD).

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## Appendix A: Quality Assurance Process For The Take 10 Program

*This Quality Assurance (QA) Process summarizes the validation procedure of participation rates for the Take 10 Program during the 2010 Census.*

DMD Cost and Progress calculates response rates and participation rates at the following levels of geography:

1. National
2. State
3. County
4. Collection Tract
5. Consolidated City
6. Incorporated Place
7. Minor Civil Division
8. Municipality
9. American Indian Area (Reservation)
10. Puerto Rico/Municipios
11. Puerto Rico State Equivalent Total

After the calculations, DMD Cost and Progress produces a SAS file containing response rates and participation rates. This Response Rate/Participation Rate file identifies and “flags” all participation rates categorized as critical errors, outliers or High Profile Top 100 Places. These categories are defined in the following:

- Critical error – the participation rate is less than zero percent, greater than 100 percent, or lower than the last approved
- Outlier - the change in the participation rate from the previous day to the current day is outside of three standard deviations from the national mean for that level of geography
- High Profile Top 100 Places - the 100 largest places in the United States, based on recent population estimates

DSSD retrieves the file and uses it to produce a report containing only participation rates that are critical errors, outliers, and High Profile Top 100 Places. The resulting report is forwarded to the Quality Assurance Team (QAT).<sup>1</sup>

**The QAT reviews the report. Based on their evaluation, they determine if critical errors and/or outliers should be investigated.**

**I. If critical errors and/or outliers do not need to be investigated, the following occurs:**

---

<sup>1</sup> The *Quality Assurance Team (QAT)* consists of employees from C2PO, DSSD and DMD.

- The QAT meets with Senior Staff<sup>2</sup> to report QA findings.
- Senior Level Staff informs Executive Staff,<sup>3</sup> via email, that participation rates are approved to post. Critical errors, if present, are replaced by “Last Approved” data.

**II. If critical errors and/or outliers need to be investigated the following occurs:**

- The QAT forwards the report to Decennial Response Integration System, DSPO, and DMD Cost and Progress for disposition. Upon completion they forward their findings to the QAT.
- The QAT meets with Senior Staff to report QA findings. If available, dispositions of prior critical errors and outliers are reviewed.
- Senior Staff meets with Executive Staff to report QA findings. Based on these findings, the QA process follows one of the two subsequent paths.

**1. Small number of critical errors with state data involved and/or outliers are of concern.**

Executive Staff decides if critical errors and/or specific outliers should be replaced with “Last Approved” data.

- a. If Executive Staff decides to replace critical errors and/or specific outliers with “Last Approved” data, the following occurs:
  - Senior Staff notifies DSSD to make authorized<sup>4</sup> edits to the Response Rate / Participation Rate File.
- b. If Executive Staff decides not to replace critical errors and/or specific outliers with “Last Approved” data, the following occurs:
  - Senior Staff notifies DSSD to replace ALL participation rate data in the Response Rate / Participation Rate file with “Last Approved” data.

**2. Large number of critical errors.**

Executive Staff decides if ALL data should be replaced with “Last Approved” data.

- a. If Executive Staff decides to replace ALL data with “Last Approved” data, the following occurs:

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<sup>2</sup> *Senior Staff* consists of Assistant Division Chiefs from DMD and DSSD.

<sup>3</sup> *Executive Staff* consists of employees at the Division Chief level and above.

<sup>4</sup> *Authorized* edits are those approved by Executive Staff.

- Senior Staff notifies DSSD to replace ALL participation rate data in the Response Rate/Participation Rate file with “Last Approved” data.
- b. If Executive Staff decides not to replace ALL data with “Last Approved” data, the following occurs:
- Senior Staff notifies SSD to shut down the Take 10 Public Facing Tool (external site).

#### **ADDITIONAL INFORMATION**

- All lines not appearing on the report as critical errors or outliers will have their current date stored automatically by the application as the “Date of Last Approved Participation Rate.” The corresponding participation rate will be stored as the “Last Approved Participation Rate.”
- The data that are reported are exclusively ID and unduplicated cases, therefore it is not anticipated that there will be many outliers caused by problems such as a large amount of duplicate forms for one address.

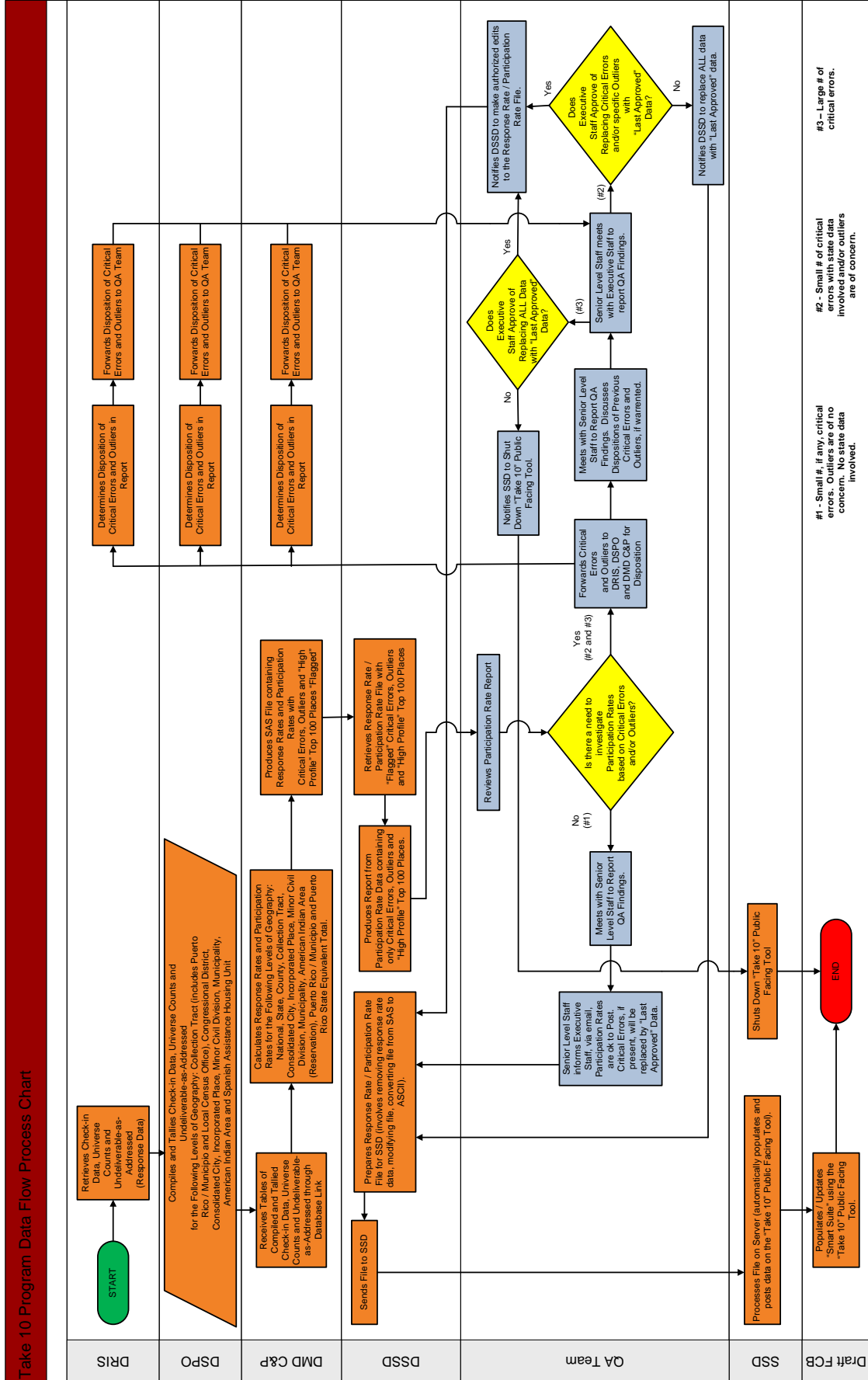
## Appendix B: Mail Response Rates Report Names With Description

	<b>Report Name</b>	<b>Description</b>
1	Preliminary Unduplicated Mail Response Rates National-RCC-LCO Type-LCO-State/County-Collection Tract	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
2	Preliminary Unduplicated Mail Response Rates National - State - County - Collection Tract	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
3	Preliminary Unduplicated Mail Response Rates National-RCC-LCO Type-LCO (Unmailables)	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
4	Preliminary Unduplicated Mail Response Rates Incorporated Places in U.S - Incorporated Places by State - Incorporated Place	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
5	Preliminary Unduplicated Mail Response Rates Minor Civil Divisions in U.S.- MCD's by State-MCD's by County-Minor Civil Division	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
6	Preliminary Unduplicated Mail Response Rates Municipalities in U.S. - Municipalities by State - Municipality	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
7	Preliminary Unduplicated Mail Response Rates Consolidated City Report	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
8	Preliminary Unduplicated Mail Response Rates American Indian Areas In U.S.- American Indian Area-Collection Tract	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
9	Preliminary Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-RCC-LCO Type-LCO-State/County-Collection Tract	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
10	Preliminary Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-State-County-Collection Tract	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
11	Preliminary Unduplicated Mail Response Rates Puerto Rico - LCO - Municipio - Collection Tract	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
12	Preliminary Unduplicated Mail Response Rates Puerto Rico - Municipio - Collection Tract	Displayed preliminary response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
13	Executive Report Actual vs. Expected Unduplicated Mail Response Rates	Provided a comparison between the actual national response rate and the expected national response rate.

14	Actual vs. Expected Mail Response Rates – Graph and Actual vs. Expected Mail Participation Rates – Graph	Displayed the minimum expected response rate, maximum expected response rate, and actual response rate (Actual vs. Expected Mail Response Rates – Graph) and the minimum expected participation rate, maximum expected participation rate, and actual participation rate (Actual vs. Expected Mail Participation Rates – Graph).
15	Final Duplicated Mail Response-National-State	Displayed the number of housing units for which the Census Bureau acknowledged receipt of more than one questionnaire through the end of data collection.
16	Final Unduplicated Mail Response Rates National-RCC-LCO Type-LCO-State/County-Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
17	Final Unduplicated Mail Response Rates National-State-Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
18	Final Unduplicated Mail Response Rates National-State-Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
19	Final Unduplicated Mail Response Rates Minor Civil Divisions in U.S.-MCDs by State-MCDs by County-Minor Civil Division	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
20	Final Unduplicated Mail Response Rates Municipalities in U.S. - Municipalities by State - Municipality	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
21	Final Unduplicated Mail Response Rates - Consolidated City	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
22	Final Unduplicated Mail Response Rates American Indian Areas In U.S.-American Indian Area-Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
23	Final Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-RCC-LCO Type-LCO-State/County-Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
24	Final Unduplicated Mail Response Rates for Spanish Assistance Housing Units National-State-County-Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
25	Final Unduplicated Mail Response Rates Puerto Rico - LCO - Municipio - Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.
26	Final Unduplicated Mail Response Rates Puerto Rico - Municipio - Collection Tract	Displayed final response rate and participation rate data for all mailback response types whose status could be verified at the geographic levels stated in the “Report Name”.



# Appendix C: Take 10 Program Data Flow Process Chart



## Appendix D: Data Provided By Mail Response Rates Program

<b>Data Provided</b>	<b>Definition</b>
Progress As Of Date	The most current date from which the progress data are associated with.
Universe	The total number of housing units that were mailed or hand-delivered an initial questionnaire. The universe does not contain housing units ineligible for NRFU.
2000 Final Response Rate Percent	The final mail response percentages for the area at the conclusion of data collection for the Census 2000. These data apply to the geographic boundaries of the area in Census 2000, which may differ from the current boundaries.
2000 Final Response Rate Percent before NRFU	The final mail response percentages for the area prior to identification of the Nonresponse Followup universe. These data apply to the geographic boundaries of the area in Census 2000, which may differ from the current boundaries.
Total Cumulative Response Percent	Calculated by dividing the "Total Cumulative Responses" by the "Universe," multiplied by 100.
Total Cumulative Responses	Total number of unduplicated responses from housing units through the Progress as of Date, across response types with Census IDs. Questionnaires returned UAA are not counted as responses.
Total Daily Responses	Total number of unduplicated responses from housing units on the Progress as of Date, across response types with Census IDs. Questionnaires returned UAA are not counted as responses.
Initial Questionnaire Cumulative Response Percent	Calculated by dividing the "Initial Questionnaire Cumulative Responses" by the "Universe," multiplied by 100.
Initial Questionnaire Cumulative Responses	The cumulative number of responses from MO/MB or U/L initial questionnaires that the Census Bureau acknowledged receipt of through the Progress as of Date. As an unduplicated tally, this figure excludes cases where the initial questionnaire was received after another questionnaire of any type.
Initial Questionnaire Daily Responses	The number of initial responses from MO/MB or U/L initial questionnaires that the Census Bureau acknowledged receipt of on the Progress as of Date. As an unduplicated tally, this figure excludes cases where the initial questionnaire was received after another questionnaire of any type.
Replacement Questionnaire Cumulative Response Percent	Calculated by dividing the "Replacement Questionnaire Cumulative Responses" by the "Universe," multiplied by 100.
Replacement Questionnaire Cumulative Responses	The cumulative number of responses from mailback replacement questionnaires that the Census Bureau acknowledged receipt of through the Progress as of Date. As an unduplicated tally, this figure excludes cases where the replacement questionnaire was received after another questionnaire of any type.
Replacement Questionnaire Daily Responses	The number of responses from replacement questionnaires that the Census Bureau acknowledged receipt of on the Progress as of Date. As an unduplicated tally, this figure excludes cases where the replacement questionnaire was received after another questionnaire of any type.
Form Fulfillment Cumulative Response Percent	Calculated by dividing the "Form Fulfillment Cumulative Responses" by the "Universe," multiplied by 100.

Form Fulfillment Cumulative Responses	The cumulative number of responses from Form Fulfillment questionnaires that the Census Bureau acknowledged receipt of through the Progress as of Date. As an unduplicated tally, this figure excludes cases where the form fulfillment questionnaire was received after another questionnaire of any type. In the preliminary data, the form fulfillment responses tally will only include those with an existing Census ID marked on the form.
Form Fulfillment Daily Responses	The number of responses from Form Fulfillment questionnaires that the Census Bureau acknowledged receipt of on the Progress as of Date. As an unduplicated tally, this figure excludes cases where the form fulfillment questionnaire was received after another questionnaire of any type. In the preliminary data, the form fulfillment responses tally will only include those with an existing Census ID marked on the form.
Telephone Questionnaire Assistance Cumulative Response Percent	Calculated by dividing the "Telephone Questionnaire Assistance Cumulative Responses" by the "Universe," multiplied by 100.
Telephone Questionnaire Assistance Cumulative Responses	The cumulative number of responses from Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone responses that the Census Bureau acknowledged receipt of through the Progress as of Date. As an unduplicated tally, this figure excludes cases where the TQA response was received after another questionnaire of any type. In the preliminary data, the TQA responses tally will only include those with an existing Census ID given to the interviewer.
Telephone Questionnaire Assistance Daily Responses	The number of responses from Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone responses that the Census Bureau acknowledged receipt of on the Progress as of Date. As an unduplicated tally, this figure excludes cases where the TQA response was received after another questionnaire of any type. In the preliminary data, the TQA responses tally will only include those with an existing Census ID given to the interviewer.
Undeliverable-As-Addresses Cumulative Percent	Calculated by dividing the "Undeliverable-as-Addressed Cumulative" by the "Universe," multiplied by 100.
Undeliverable-As-Addresses Cumulative	The cumulative number of questionnaires that were returned as Undeliverable-as-Addressed that the Census Bureau acknowledged receipt of through the Progress as of Date.
Undeliverable-As-Addresses Daily	The number of questionnaires that were returned as Undeliverable-as-Addressed that Census acknowledged receipt of on the Progress as of Date.
2000 Final Participation Percent	The final mail participation percentages for the area at the conclusion of data collection for Census 2000. These data apply to the geographic boundaries of the area in Census 2000, which may differ from the current boundaries.
Total Cumulative Participation Percent	Calculated by dividing the "Total Cumulative Responses" by the "Universe," multiplied by 100. "Undeliverable-As-Addressed" are removed from the "Universe" prior to this calculation.
Universe (with Unmailables)	The total number of housing units that were mailed or hand-delivered an initial questionnaire plus those deemed to have problem addresses prior to being mailed or hand-delivered an initial questionnaire.
Total Cumulative Response Percent (with Unmailables)	Calculated by dividing "Total Cumulative Responses" by "Universe (with Unmailables)", multiplied by 100.
Initial Questionnaire Cumulative Response Percent (with Unmailables)	Calculated by dividing the "Initial Questionnaire Cumulative Responses" by the "Universe (with Unmailables)", multiplied by 100.

Replacement Questionnaire Cumulative Response Percent (with Unmailables)	Calculated by dividing the “Replacement Questionnaire Cumulative Responses” by the “Universe (with Unmailables)”, multiplied by 100.
Form Fulfillment Cumulative Response Percent (with Unmailables)	Calculated by dividing the “Form Fulfillment Cumulative Responses” by the “Universe (with Unmailables)”, multiplied by 100.
Telephone Questionnaire Assistance Cumulative Response Percent (with Unmailables)	Calculated by dividing the “Telephone Questionnaire Assistance Cumulative Responses” by the “Universe (with Unmailables)”, multiplied by 100.
Undeliverable-As-Addressed Cumulative Percent (with Unmailables)	Calculated by dividing the “Undeliverable-as-Addressed Cumulative” by the “Universe (with Unmailables)”, multiplied by 100.
Total Response Rate	Calculated by dividing the Total Cumulative Responses by the Universe, multiplied by 100.
Total Response Rate (with Unmailables)	Calculated by dividing "Total Cumulative Responses" by the "Universe (with Unmailables)", multiplied by 100.
Spanish Assistance Universe	The total number of housing units that were mailed or hand-delivered an initial questionnaire. The universe does not contain housing units ineligible for NRFU.
Expected Date	The date that expected response rates apply to.
Minimum Expected Response Rate	The expected response rate with a rate of 59 percent at the end of the creation of the NRFU universe (4/20/2010).
Maximum Expected Response Rate	The expected response rate with a rate of 65 percent at the end of the creation of the NRFU universe (4/20/2010).
Total Participation Rate	Calculated by dividing the “Total Cumulative Responses” by the “Universe,” multiplied by 100. "Undeliverable-As-Addressed" are removed from the "Universe" prior to this calculation.
Minimum Expected Participation Rate	The expected participation rate, that coincides with a response rate of 59 percent at the end of the creation of the NRFU universe (4/20/2010).
Maximum Expected Participation Rate	The expected participation rate, that coincides with a response rate of 65 percent at the end of the creation of the NRFU universe (4/20/2010).
Initial Questionnaire & Replacement Questionnaire	Total number of housing units that the Census Bureau acknowledged receipt of both an Initial Questionnaire and a Replacement Questionnaire form from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Be Counted Form	Total number of housing units that the Census Bureau acknowledged receipt of both an Initial Questionnaire and a Be Counted Form from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Form Fulfillment	Total number of housing units that the Census Bureau acknowledged receipt of both an Initial Questionnaire and a Form Fulfillment response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.

Initial Questionnaire & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of both an Initial Questionnaire and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Replacement Questionnaire & Be Counted Form	Total number of housing units that the Census Bureau acknowledged receipt of both a Replacement Questionnaire and a Be Counted Form from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Replacement Questionnaire and Fulfillment Form	Total number of housing units that the Census Bureau acknowledged receipt of both a Replacement Questionnaire and a Form Fulfillment response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Replacement Questionnaire & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of both a Replacement Questionnaire and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Be Counted Form & Fulfillment Form	Total number of housing units that the Census Bureau acknowledged receipt of both a Be Counted form and a Form Fulfillment response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Be Counted Form & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of both a Be Counted Form and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Fulfillment Form & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of both a Form Fulfillment response and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Replacement Questionnaire & Be Counted Form	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Replacement Questionnaire, and a Be Counted Form from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Replacement Questionnaire & Form Fulfillment	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Replacement Questionnaire, and a Form Fulfillment response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.

Initial Questionnaire & Replacement Questionnaire & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Replacement Questionnaire, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Be Counted Form & Form Fulfillment	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Be Counted Form, and a Form Fulfillment response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Be Counted Form & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Be Counted form, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Form Fulfillment & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Form Fulfillment response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Replacement Questionnaire & Be Counted Form & Form Fulfillment	Total number of housing units that the Census Bureau acknowledged receipt of a Replacement Questionnaire, a Be Counted Form, and a Form Fulfillment response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Replacement Questionnaire & Be Counted Form & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of a Replacement Questionnaire, a Be Counted form, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Replacement Questionnaire & Form Fulfillment & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of a Replacement Questionnaire, a Form Fulfillment response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Be Counted Form & Form Fulfillment & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of a Be Counted Form, a Form Fulfillment response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Replacement Questionnaire & Be Counted Form & Form Fulfillment	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Replacement Questionnaire, a Be Counted Form, and a Form Fulfillment response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.

Initial Questionnaire & Replacement Questionnaire & Be Counted Form & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Replacement Questionnaire, a Be Counted Form response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Replacement Questionnaire & Form Fulfillment & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Replacement Questionnaire, a Form Fulfillment response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Be Counted Form & Form Fulfillment & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Be Counted Form, a Form Fulfillment response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Replacement Questionnaire & Be Counted Form & Form Fulfillment & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of a Replacement Questionnaire, a Be Counted Form, a Form Fulfillment response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Initial Questionnaire & Replacement Questionnaire & Be Counted Form & Form Fulfillment & Telephone Questionnaire Assistance	Total number of housing units that the Census Bureau acknowledged receipt of an Initial Questionnaire, a Replacement Questionnaire, a Be Counted Form, a Form Fulfillment response, and a Telephone Questionnaire Assistance (TQA) Short Form Capture (SFC) phone response from the same housing unit, through the end of data collection. This includes all cases, regardless of the order that the responses were received. Response numbers will come from Data Capture RPS and UCM and produced by UCM.
Total Duplicates	Total amount of housing units that the Census Bureau acknowledged receipt of more than one questionnaire form from the same housing, through the end of data collection.
Be Counted Form Cumulative Response Percent	Calculated by dividing the “Be Counted Form Cumulative Responses” by the “Universe,” multiplied by 100.
Be Counted Form Cumulative Responses	The number of Be Counted Form (BCF) questionnaires that the Census Bureau acknowledged receipt of through the Progress as of Date. As an unduplicated tally, this figure excludes cases where the Be Counted form was received after another questionnaire of any type.

## Appendix E: Change Requests For Mail Response Rates/Take 10 Program

	<b>Change Request</b>	<b>Description</b>	<b>Submitted</b>	<b>Implemented</b>
1	The Addition of Participation Rates to the Mail Response Rates Program	Due to the increased number of vacant housing units caused by the state of the economy and recent natural disasters, it was determined that the mail participation rate was a more accurate measure of mail returns than the mail response rate. As a result, mail participation rates were added to reporting for the Mail Response Rates Program.	1/20/2010	Before initial Mail Response Rates Program posting date of 3/06/2010.
2	The Modification of Data Shells and Tables for the Mail Response Rates Program for the 2010 Census	Due to the increased number of vacant housing units caused by the state of the economy and recent natural disasters, it was determined that the mail participation rate was a more accurate measure of mail returns than the mail response rate. Mail participation rates were added to reporting for the Mail Response Rates Program. As a result, data shells and tables were edited to display this information.	1/20/2010	Before initial Mail Response Rates Program posting date of 3/06/2010.
3	The Addition of "Help Definitions" to Account for the Inclusion of Participation Rates in the Mail Response Rates Program for the 2010 Census	Due to the increased number of vacant housing units caused by the state of the economy and recent natural disasters, it was determined that the mail participation rate was a more accurate measure of mail returns than the mail response rate. Mail participation rates were added to reporting for the Mail Response Rates Program. As a result, "help definitions" were modified in the reporting for the Mail Response Rates Program.	1/20/2010	Before initial Mail Response Rates Program posting date of 3/06/2010.
4	The Addition of Census 2000 Response Rates at the 2000 NRFU Cut Date to Data Shells and Help Definitions for the Mail Response Rates Program for the 2010 Census	It was decided to display the Census 2000 Response Rate at the 2000 NRFU cut date, April 18, 2000, on reports from Cost & Progress' Mail Response Rates System.	3/17/2010	4/15/2010
5	The Addition of Unmailables to Data Shells and Help Definitions for the Mail Response Rates Program for the 2010 Census	It was decided to add "unmailables" to reporting for Cost & Progress' Mail Response Rates System. This addition facilitated the determination of Nonresponse Followup workload.	4/8/2010	4/10/2010
6	The Addition of "Minimum Expected Response Rate", "Maximum Expected Response Rate", "Minimum Expected Participation Rate", and "Maximum Expected Participation Rate" to Data Shells and Help Definitions for the Mail Response Rates Program for the 2010 Census	It was decided to display the "Expected Response Rate" and the "Expected Participation Rate" for Census 2010 using two values for each: one assuming a 59 percent Response Rate at the NRFU cut date, April 20, 2010, and the other assuming a 65 percent Response Rate at the NRFU cut date, April 20, 2010.	3/22/2010	4/14/2010
7	Edits to Final External Posting in October 2010	Due to issues with program data processes, all non-IDs included in mail return data could not be verified as mail returns. As a result, it was decided to calculate the 2000 final rates without non-IDs. These rates were compared to the 2010 final rates from "Progress as of Date" September 8, 2010 (also without non-IDs) in the final external postings.	10/12/2010	Before final posting date of 10/21/2010 for the Take 10 Program.



8	The Addition of "Reservation" Level Data for American Indian Areas to the "Take 10" Program	The Take 10 Program did not receive "reservation" level mail participation rate data for the American Indian Areas involved in the Mail Response Rates/Take 10 Program. These data were added so they could be uploaded to the Take 10 Public Facing Tool (2010 Census Mail Participation Rate Map).	4/12/2010	4/15/2010
9	The Addition of "State" Level Data for Puerto Rico to the "Take 10" Program	The Take 10 Program did not receive "state" level participation rate data for Puerto Rico. These data were added so they could be uploaded to the Take 10 Public Facing Tool (2010 Census Mail Participation Rate Map).	3/23/2010	3/26/2011
10	The Removal of "Congressional Districts" as a Geographic Level for which Response Rates and Participation Rates are Calculated	It was decided not to calculate mail response rates and mail participation rates for "congressional districts".	1/7/2010	Before initial Mail Response Rates Program posting date of 3/06/2010.
11	The Addition of Footnote to the "Executive Report Actual vs. Expected Unduplicated Mail Response Rates" Report	A footnote was added on the "Executive Report Actual vs. Expected Unduplicated Mail Response Rates" report for information purposes. It read, "The expected participation rates and expected response rates on this report include Puerto Rico while the actual participation rates and actual response rates exclude Puerto Rico."	3/19/2010	3/26/2011
12	The Addition of "Local Census Office" (LCO) as a Level of Geography for Puerto Rico for the Mail Response Rates Program during the 2010 Census	Local Census Offices (LCO) in Puerto Rico requested response rates and participation rates at their level of geography to assist them with operations during the 2010 Census. This information was added to the reporting for the Mail Response Rates Program.	2/16/2010	Before initial Mail Response Rates Program posting date of 3/06/2010.
13	Requirements Specification for the 2010 Census Preliminary Response Rates and Final Response Rates	A file was created by GEO that linked 2010 Census collection geography to Universe Control and Management (UC&M) tabulation geography. Afterwards, DSPO modified their method of representing the state > county > minor civil division relationships, which prevented minor civil divisions from occasionally showing up in incorrect counties.	3/4/2010	Before initial Take 10 Program posting date of 3/22/2010.